MIT's Oldest and Largest Newspaper



WEATHER, p. 2

TUE: 65° F | 55° F

Mostly cloudy

WED: 63° F | 46° F

Rain showers

THU 58° F | 43° F

Chance of showers

Volume 131, Number 24 tech.mit.edu Tuesday, May 3, 2011

First open house in over 30 years draws 20,000

Organizers deem it 'tremendous success'; MIT ponders holding more frequent open houses

By Ethan A. Solomon *EDITOR IN CHIEF*

To the outside world, MIT can be an intimidating place. Films like Good Will Hunting and 21 have portrayed the Institute as an exclusive — and sometimes snobbish — club of scientists and engineers. Last Saturday, MIT set out to change all that by hosting its first open house in more than 30 years, dubbed "Under the Dome."

An estimated 20,000 visitors came to MIT for demonstrations, tours, and exhibits hosted by MIT student groups, academic departments, and administrative divisions. From demonstrations of the Wright Brothers Wind Tunnel (Building 17), to a UH 60 Black Hawk fly-in to Briggs Field, to the Baker House piano drop, MIT hosted 312 events in five hours. Children especially seemed to enjoy the day-long affair — and availed themselves of opportunities to climb campus artwork.

Still, not all of MIT was open. Labs which could not allow visitors inside opted to bring demonstrations to public spaces. Academic departments, student groups, and MIT divisions were asked to independently develop open house events, underscoring the largely decentralized organizational process behind Under the Dome. Operations like information booths and security were, however, organized on the level of the entire campus.

David A. Mindell '96, chair of the MIT150 Steering Committee, was pleased with the open house, noting that nothing like it has happened in recent MIT history. Since MIT's last open house was over 30 years ago, Mindell said that the open house was "nothing anybody on campus had done before." He said there were no significant security incidents.

Paul A. Lagacé '78, open house co-chair, described the day as a "tremendous success." He indicated that, despite the 30-year gap between MIT's last open house and this one, the next open house might come sooner.

"Everybody is excited about the opportunity to do this again," said

Open house, Page 11



MANOHAR SRIKANTH—THE TECH

Children learn the inner workings of a joystick-controlled robotic manipulator during a technology demonstration at the Stata Center during MIT's Under The Dome open house celebration on Saturday afternoon. Approximately 20,000 attendees visited campus for the first open house in over 30 years, part of MIT's 150th anniversary celebrations. For more photos of Under The Dome, see p. 11.

Boston celebrates death of Osama bin Laden



GREG STEINBRECHER—THE TECH

A crowd mostly composed of college students gathered at the Parkman Bandstand on Boston Common late Sunday evening to celebrate the death of terrorist Osama bin Laden. Two days ago, President Barack Obama announced that bin Laden was killed by a joint ground operation of the Navy SEALs and the CIA. The crowd sustained itself for almost two hours with an ebullient atmosphere, chanting and occasionally singing. Police officers stood nearby to monitor the energetic gathering. The students seemed to be predominantly from Boston University and MIT, with sparser showings from other area colleges.

IN SHORT

The MIT Awards Convocation will be held in 10-250 today at 4 p.m. MIT will recognize students, faculty, and staff for contributions they have made to the MIT community.

Amar G. Bose '51 donated a majority of Bose Corporation stock to MIT in the form of non-voting shares, according to an announcement from the MIT News Office last Friday. For more, see pgs. 15, 17.

The Kendall Band has been fixed thanks to the MIT

Kendall Band Preservation Society. Go make some music at the Kendall/MIT MBTA station.

Already thinking about next semester? Pre-registration for classes opened yesterday.

The MIT150 Brains, Minds, and Machines symposium will be held today through Thursday in Kresge Auditorium.

Send news information and news feedback to news@tech.mit.edu.

Maseeh to have binding lottery

Students moving into Maseeh Hall next term will not be able to enter the re-adjustment lottery. Maseeh Hall is an RBA dorm, and like McCormick, students who place in Maseeh in the summer lottery will have to live in that dorm. Virginia L. Nicholson '12, Phoenix Group president, confirms that Maseeh will still participate in REX, but students will not have the option to move into Maseeh in the re-adjustment lottery - which about a third of incoming freshmen enter. The dorm will still hold events open to the entire campus.

"To secure RBA and to create a strong stable community from the day the dorm opens its doors, the Housemasters agreed that selection of Maseeh would be binding," Nicholson said

Although the decision for this coming fall is set, Maseeh's binding RBA status will be reviewed to see if that will be changed in the future.

"Whatever benefits are gained by making RBA binding, we need to decide if those outweigh the benefits of participating in REX," said Daniel D. Hawkins '12, UA Housing Committee chair.

—Stan Gill

Stem cells still alive

Courts support legality of research

By John A. Hawkinson

STAFF REPORTER

Human embryonic stem cell researchers — at MIT and elsewhere —

can rest easy ... at least for now.

After five months of waiting for two different courts, the U.S. legal system has taken one small step toward permitting that research to continue. But it will be months before the case is fully resolved. Friday morning, the United States Court of Appeals for the District of Columbia voted 2-1 to dismiss a preliminary injunction barring the National Institutes of Health from funding human embryonic stem cell research.

That injunction had been on hold (stayed) while the court heard an appeal in the case, *Sherley v. Sebelius*, so researchers have been able to continue their work during these past months. The case was argued before the three-judge panel on Dec. 6, 2010.

In the case, former MIT professor and adult stem cell researcher James L. Sherley sued the U.S. government to prevent the NIH from funding human embryonic stem cell research, on the grounds that it violates a Congressional appropriations rider barring federal funding of research that destroys human embryos.

Sherley, who is black, was denied tenure by MIT in 2006. This led to a hunger strike by Sherley and an acrimonious dispute over the tenure process; Sherley claimed his tenure decision was a result of racism. He is now a researcher at the Boston Biomedical Research Institution, which does not support Sherley in this case. Sherley, like all BBRI investigators, is expected to fund his own research, including his salary.

In a 21-page decision, Judge Douglas Ginsburg wrote:

Stem cells, Page 12

KEEP THE BUSH TAX CUTS

Contrary to what Dems say, the Bush tax cuts are sound fiscal policy. **OPINION, p. 4**

PREFROSH INVADE THE TECH

Why did the Class of 2015 pick MIT? **CAMPUS LIFE, p. 18**

BREAKING THE CODE

Central Square Theater does Alan Turing. **ARTS**, **p. 9**



THESE AREN'T JUST PUMPKINS

Glass art master Dale Chihuly's work is live at the Boston MFA.

ARTS, p. 10

OSAMA BIN LADEN IS DEAD

If you haven't heard, get out of that cave you've been living in. **WORLD/NATION**, p. 2

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NATION WORLD

Bin Laden DNA match is likely a parent or child

While federal officials said that analysis of DNA from several relatives helped confirm that it was Osama bin Laden who was killed in the military raid on Sunday, they have not yet disclosed the relationships of the family members whose DNA

Officials said they collected multiple DNA samples from bin Laden's relatives in the years since the Sept. 11 attacks. And they said the analysis, which was performed the day bin Laden was killed but after his body was buried at sea, confirmed his identity with 99.9 percent accuracy.

Some scientific experts said on Monday that if results really were so accurate, at least one of the sources was likely to have been a close relative, like a child or parent with whom he shared half his genes.

"That would be most likely," said Frederic Zenhausern, director of the Center for Applied NanoBioscience and Medicine at University of Arizona.

DNA matching usually involves obtaining material from a blood sample or cheek swab.

-Donald G. Mcneil Jr. and Pam Belluck, The New York Times

Extra tax revenue to delay debt crisis until August

WASHINGTON — A greater-than-expected increase in tax revenue has extended by about a month, until early August, the federal government's ability to pay its bills without an increase in the debt ceiling, the Treasury Department said

The new estimate creates a significant grace period for Congress to consider an increase in the maximum amount that the government can borrow, a step that House Republicans say they will not take without an agreement to curb spending.

Federal borrowing is still likely to hit the legal limit on May 16, the Treasury said, so this week it will begin to take emergency steps to buy additional time under the cap. Those steps, plus the increase in tax receipts, which have reduced the need for borrowing, will delay a crisis by about a month — to August

"While this updated estimate in theory gives Congress additional time to complete work on increasing the debt limit, I caution strongly against delaying action," the Treasury secretary, Timothy F. Geithner, wrote Monday to lawmakers.

—Binyamin Appelbaum, The New York Times

Two years after a bankruptcy, Chrysler posts a profit

DETROIT — The Chrysler Group, two years removed from its descent into bankruptcy, posted on Monday its first quarterly profit since 2006, as the company sold more cars and trucks at higher prices.

Chrysler, the only Detroit automaker to lose money last year, earned \$116 million in the quarter, after losing \$197 million in the period a year ago. Revenue grew 35 percent, to \$13.1 billion, while sales were up 18 percent.

"Chrysler Group's improved sales and financial performance in the first quarter show that our rejuvenated product lineup is gaining momentum in the marketplace and resonating with customers," Sergio Marchionne, the chief executive of Chrysler and its Italian partner, Fiat, said in a statement. "These results are a testament to the hard work and dedication of our employees, suppliers and dealers, all of whom are helping Chrysler create a new corporate culture built on the quality of our products and processes, and simple, sound management principles."

-Nick Bunkley, The New York Times

Emblem of evil in the US, icon to the cause of terror

By Kate Zernike and Michael T. Kaufman

THE NEW YORK TIMES

Osama bin Laden, who was killed in Pakistan on Sunday, was a son of the Saudi elite whose radical, violent campaign to re-create a seventh-century Muslim empire redefined the threat of terrorism for the 21st century.

With the attacks on the World Trade Center and the Pentagon on Sept. 11, 2001, bin Laden was elevated to the realm of evil in the American imagination once reserved for leaders like Hitler and Stalin. He was a new national enemy, his face on wanted posters. He gloated on videotapes, taunting the United States and Western civilization.

It took nearly a decade before the United States' quest ended in Pakistan with the death of bin Laden in a firefight with American forces, who attacked a compound where officials said he had been hiding.

The manhunt was punctuated in December 2001 by a battle at an Afghan mountain redoubt called Tora Bora, near the border with Pakistan, where bin Laden and his allies were hiding. Despite days of pounding by American bombers, bin Laden escaped. For more than nine years afterward he remained an elusive, shadowy figure frustratingly beyond the grasp of his pursuers and thought to be holed up somewhere in Pakistan and plotting new attacks.

Long before, he had become a hero in much of the Islamic world, as much a myth as a man - what a longtime CIA officer called "the North Star" of global terrorism. He had united disparate militant groups, from Egypt to Chechnya, from Yemen to the Philippines, under the banner of al-Qaida and his ideal of a borderless brotherhood of radical Islam.

Terrorism before bin Laden was often state-sponsored, but he was a terrorist who had sponsored a state. From 1996 to 2001, he bought the protection of the Taliban, then the rulers of Afghanistan and used the time and the freedom to make al-Qaida - the name means "the base" - a multinational corporation to export terror around the

After the Sept. 11 attacks, the names al-Oaida and bin Laden spread to every corner of the globe. Groups calling themselves al-Qaida, or acting in the name of its cause, attacked U.S. troops in Iraq, bombed tourist spots in Bali, and blew up passenger trains in Spain.

He waged holy war with modern methods. He sent fatwas — religious decrees - by fax and declared war on Americans in an email message beamed by satellite around the world. Al-Qaida members kept bomb-making manuals on CD and communicated with encrypted memos on laptop computers, leading one American official to declare that bin Laden possessed better communication technology than the United States.

He styled himself a Muslim ascetic, a billionaire's son who gave it all up for the cause. But he was media-savvy and acutely imageconscious; before a CNN crew that interviewed him in 1997 was allowed to leave, his media advisers insisted on editing out unflattering shots. He summoned reporters to a cave in Afghanistan when he needed to get his message out, but like the most controlling of CEOs, he insisted on receiving written questions in advance.

Although he claimed to follow the purest form of Islam, many scholars insisted that he was glossing over Islam's edicts against killing innocents and civilians. Islam draws boundaries on where and why holy war can be waged; bin Laden declared the whole world fair territory.

Bin Laden's sprawling compound stood out in neighborhood

By Salman Masood THE NEW YORK TIMES

ABBOTTABAD, Pakistan — The sprawling compound where Osama bin Laden sheltered before his death stood out in its middle-class neighborhood on the edges of this scenic city, home to a large Pakistani military base and a military academy.

The compound is about eight times the size of most homes in the area and was surrounded by high walls topped with barbed wire. Nearby residents noticed that few people ever ventured out of the house, and although a senior Obama administration official said the property was valued at about \$1 million, no telephone lines ran into the compound.

Still, nearby residents in the area

called Bilal Town, where many retired and serving military officials live, said they were not suspicious of the house's occupants and never suspected a high-level militant leader might be living there.

Some said they assumed the occupants mainly kept to themselves because they were religious, although even in most devout Pakistani families, men regularly socialize with other men.

Jibran Khan, 23, who lives near Bilal Town, said he had seen the huge house several times and never imagined that bin Laden would be hiding there, assuming that a wealthy person had simply decided to settle on the large piece of property with a view of the hills that surround the town.

Khan said he had never met the

people who lived in the house but knew others who did. "A friend told me that some tall, bearded men lived in the house who said they had come to Abbottabad from Peshawar some years ago due to some enmity."

But he said his friend, who ran into the men at a local bakery, told him they appeared to be Pakistanis and were always very courteous.

On Monday, the Pakistan army put up barricades to block access to all roads and alleys that lead to the house and barred journalists from going near it.

The proximity of the house to the military academy, which is about a third of a mile away, raised questions about whether Pakistani intelligence agents or military officials knew bin Laden was there.

WEATHER

Last week's tornado outbreak breaks record

By Allison A. Wing

STAFF METEOROLOGIST

As reviewed in last Friday's weather discussion, the tornado outbreak in the southern part of the country was a historic event. Yesterday, NOAA released a preliminary estimate on the total number of tornadoes associated with that storm. Between 8 a.m. April 25 and 8 a.m. April 28, there were 362 tornadoes. The bulk of those tornadoes (312) occurred between 8 a.m. April 27 to 8 a.m. April 28. This shattered the previous record for largest number of tornadoes in one event, which had been 148 from April 3-4, 1974.

The weather for the next few days looks decidedly quieter, with less of a threat of severe weather. Here in New England we will experience a sequence of cloudy days, with chances for rain showers today, tomorrow, and Thursday, associated with an approaching cold front.

Extended Forecast

Today: Mostly cloudy. High 65°F (18°C). South winds at 8-10 mph.

Tonight: Mostly cloudy, chance of showers. Low 55°F (13°C). South winds at 10-12 mph. Tomorrow: Rain showers. High 63°F (17°C). Low 46°F (8°C).

South winds at 10-15 mph. Thursday: Chance of showers. High 58°F (14°C). Low 43°F

(6°C). North winds at 8–13 mph. Friday: Partly cloudy. High 63°F (17°C). Low 48°F (9°C). Northwest winds at 8-13 mph.



Light

Moderate

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Thunderstorn

Compiled by MIT Meteorology Staff

and The Tech

In Arab world, Osama bin Laden's confused legacy

By Anthony Shadid and David D. Kirkpatrick

THE NEW YORK TIMES

BEIRUT — The words were not uncommon in angry Arab capitals a decade ago: Osama bin Laden was hero, sheik, even leader to some. But after his death, a man who once vowed to liberate the Arab world was reduced to a footnote in the revolutions and uprisings remaking a region that he and his followers had struggled to understand.

Predictably, the reactions ran the gamut Monday — from anger in the most conservative locales of Lebanon to jubilation among Shiite Muslims in Iraq, thousands of whom fell victim to carnage committed in the name of his organization. Some vowed revenge; others expressed disbelief that the man killed was in fact bin Laden.

But most remarkable perhaps was the sense in countries like Egypt, Tunisia, Libya, and elsewhere that the name bin Laden was an echo of a bygone time of ossifying divides between West and East, U.S. omnipotence and Arab impo-

tence, dictatorship and powerlessness. In recent months, it often seemed that the only people in the region who cited the name bin Laden were the mouthpieces of strongmen like Moammar Gadhafi and former Egyptian President Hosni Mubarak, evoking the al-Qaida threat to justify clinging to power.

For a man who had some responsibility for two wars and deepening U.S. intervention from North Africa to Yemen and Iraq, many say, bin Laden's death served as an epitaph to another era more than anything. For many in an Arab world where three-fifths of the population is under 30, the bombings on Sept. 11, 2001, are at most a childhood memory, if that.

"The Arab world is busy with its own big events, revolutions everywhere," said Diaa Rashwan, deputy director of the Ahram Center for Strategic and International Studies, a research organization in Cairo. "Maybe before Tunisia his death might have been a big deal, but not anymore."

Or, as Farah Murad, a 20-yearold student at the German University in Cairo, said of the attacks, "I have a vague recollection, but it was so long ago."

The United States' pursuit of bin Laden has long prompted suspicion in an Arab world that remains deeply skeptical of U.S. support for Arab dictators and its unstinting alliance with Israel. Doubts emerged Monday over the timing of his killing.

Some suggested that bin Laden's whereabouts had been long known and that the particular timing of his killing came in the interests of some party — be it the Obama administration, Pakistan or others.

In many quarters, there were calls for revenge and anger at his killing, most publicly by Ismail Haniyeh, the Palestinian prime minister and head of the Islamist movement Hamas, who called him "a Muslim and Arab warrior." Others insisted that the battle bin Laden symbolized between the U.S. and militant Islamists would go on, and indeed, his organization was always diffuse enough to survive

Obama finds praise for risky operation, even from Republicans

By Jeff Zeleny and Jim Rutenberg THE NEW YORK TIMES

WASHINGTON — President Barack Obama drew praise from unlikely quarters on Monday for pursuing a risky and clandestine mission to kill Osama bin Laden, a successful operation that interrupted the withering Republican criticism about his foreign policy, world view, and his grasp of the office.

Former Vice President Dick Cheney declared: "The administration clearly deserves credit for the success of the operation." Former New York City Mayor Rudolph Giuliani of New York said: "I admire the courage of the president." And Donald Trump declared, "I want to personally congratulate President Obama."

As fleeting as it might prove to be, the positive tone stood in blunt contrast to the narrative that Republicans have been working to build in the opening stages of the 2012 presidential campaign.

The argument that most potential Republican candidates have been making — that Obama is a weak and indecisive leader, incapable of handling rapidly evolving events around the world — suddenly became more complicated. And the boost in stature for Obama, even if temporary, comes at a moment when a number of Republicans are deciding whether to commit themselves to the presidential race, and offered fresh evidence that he might be less vulnerable than his opponents thought he might be.

The development came at a fortuitous time for Obama, who received the worst foreign policy rating of his presidency in a *New York Times/* CBS News poll last month, with 46 percent of respondents saying they disapproved of his handling of international affairs. But the long-term implications for the president and his re-election were impossibly difficult to predict.

The nation's unemployment re-

mains relatively high and the economic recovery has yet to gain traction. Seventy percent of Americans in the *Times/CBS* poll last month said the country is on the wrong track and the White House is heading into what could be a bitter fight with Republicans about spending and raising the debt limit.

But at a minimum, Obama has been dealt another high-profile opportunity to try and position himself above the bitter partisan fray and offer a voice of reasoned compromise— a theme consistent with his strategy over the past six months of shedding Republican efforts to cast him as a partisan liberal out of touch with the country's values.

"The world is safer; it is a better place because of the death of Osama bin Laden," Obama said Monday. "Today, we are reminded that, as a nation, there's nothing we can't do when we put our shoulders to the wheel, when we work together, when we remember the sense of unity that defines us as Americans."

Osama bin Laden's burial at sea aimed to prevent a shrine on land

By John Leland and Elisabeth Bumiller

d Elisabeth Bum THE NEW YORK TIMES

White House officials decided before Sunday night's firefight in northern Pakistan that if U.S. troops killed Osama bin Laden, they would bury him at sea in order to prevent his grave from becoming a shrine for his followers, a White House official said Monday. They planned to include all rites associated with Muslim burials, the official added.

U.S. officials stressed Monday that the sea burial followed Islamic custom. "The disposal of — the burial of bin Laden's remains was done in strict conformance with Islamic precepts and practices," said John O. Brennan, President Barack Obama's top counterterrorism adviser, who added the administration had consulted with Islamic experts.

"It was prepared in accordance with the Islamic requirements," he said. "We early on made provisions for that type of burial, and we wanted to make sure that it was going to be done, again, in strict conformance. So it was taken care of in the appropriate way."

But some Islamic scholars and clerics were divided Monday over whether the sea burial was appropriate or an insult to Muslims. Several said bin Laden should have been buried on land in a simple grave. The sea burial, off a U.S. aircraft carrier in the North Arabian Sea, added an ambiguous coda to a life that had been clouded in secrecy over the past decade.

According to a senior U.S. intelligence official, after members of the Navy SEALs killed the man they believed to be bin Laden at a compound in Pakistan on Sunday, CIA agents compared DNA samples with the profiles of several family members to confirm his identity, finding a "virtually 100 percent" match.

One of Bin Laden's wives who was living in the compound iden-

tified the body, the official added. CIA specialists also compared photographs of the body with known photographs of bin Laden. Brennan said the various forms of identification created "a growing sense of confidence and a growing sense of accomplishment."

"There wasn't one 'aha' when people say, you know, OK, the DNA results came in," he said. "No, this is something that was building over time, and we made a decision then last night, because we felt as though we were confident enough to go out to the American people and out to the world, to say we got him."

Brennan added that the administration had not yet decided whether to release photographs of the body. The indecision over whether to release the photographs reflected the administration's desire to end speculation about whether the man killed was really bin Laden — and its fears that the pictures would inflame and rally jihadis.

Amid violence, Turkey closes its embassy in Tripoli

ISTANBUL — Turkey closed its embassy in Tripoli, the Libyan capital, on Monday, becoming the latest country to do so amid increasing violence there. Turkey's Foreign Ministry also said it would maintain its consulate in rebel-controlled Benghazi.

"In light of recent changes in the security conditions in Libya and the emergence of potential security risks, we took an important decision last night to temporarily evacuate our embassy in Tripoli," Ahmet Davutoglu, Turkey's foreign minister, told reporters in Ankara.

"Of course this does not mean Turkey will cease its activity" in Libya, he said.

Turkey, which has had strong business ties with Libya and has acted as an intermediary between Western nations and the government of Moammar Gadhafi, has evacuated roughly 25,000 of its nationals from Libya amid the increasing chaos there. Last year, Turkey began allowing Libyan citizens to stay in Turkey for at least three months without a visa, in a strengthening of diplomatic and business relations.

-Sebnem Arsu, The New York Times

Sen. Scott Brown, a guardsman, seeks Afghanistan stint

BOSTON — Sen. Scott P. Brown of Massachusetts announced Monday that he had asked to conduct his annual training as a member of the state's Army National Guard this summer in Afghanistan.

Brown, a Republican who will face re-election next year in what is sure to be an expensive and closely watched race, has been a member of the National Guard here since 1979. A lieutenant colonel and lawyer for the Judge Advocate General Corps, he said in a statement that doing his training as requested would help educate him on the war in Afghanistan and "better understand our ongoing mission in that country."

He also said the training, which typically lasts two weeks, would "provide me firsthand experience for my duties on the Senate Armed Services, Homeland Security, and Veterans Affairs Committees."

Brown, 51, has never been deployed to a combat zone, though he completed brief assignments with the National Guard in Paraguay in 2005 and Kazakhstan in 2007. A Brown spokesman said in an email that Brown had done his annual training in Massachusetts last year.

—Abby Goodnough, The New York Times

Canada's election looks to defy early predictions

OTTAWA — Canadians voted Monday in an election that appeared set to defy its early expectations.

When his government fell in late March, Prime Minister Stephen Harper immediately began a campaign aimed at giving his Conservatives a majority in the House of Commons, ending the political instability that has brought Canada four elections since 2004.

But with the main issue at stake being whether the Conservatives would win a majority or form another minority government without one, most political analysts forecast a dull campaign, low voter turnout and, regardless, another government led by Harper in the end.

Until two weeks ago, they were more or less right.

Since then, the unexpected rise of the New Democrats, a party historically distinguished by its lock on third place, over the final weeks of the campaign has left even some of Canada's most opinionated commentators at a loss for predictions.

While two Conservative Party officials, who declined to be identified because they were not authorized to speak about internal forecasts, acknowledged that it was unlikely that Harper would get his majority, most polls suggested that he would remain as prime minister.

Beyond that, however, the outcome of the election seemed to be anyone's guess.

—Ian Austen, The New York Times

Blagojevich's second federal corruption trial begins

CHICAGO — Rod R. Blagojevich, the former governor of Illinois who is charged with trying to sell the U.S. Senate seat that once belonged to President Barack Obama, talked and talked and talked. But he never really sealed a deal, criminal or otherwise.

So went the defense presented by Blagojevich's lawyers as his second federal corruption trial opened Monday, more than eight months after a first trial ended with a jury divided on all but one in a thick tangle of criminal charges against him.

Aaron Goldstein, Blagojevich's lawyer, told this new set of jurors that federal authorities had never discovered a pot of money in Blagojevich's possession after his arrest in 2008. They had never found a flush bank account. "They found nothing because there is nothing," Goldstein said.

"In the end, you will have nothing," he said.

In many ways, Blagojevich's new trial felt like a muted, less circuslike replay of the last one: same courtroom, same judge, same prosecutors, same hair. But this trial — with only a shrunken group of curious residents here to touch Blagojevich or seek his autograph — is expected to be more challenging for Blagojevich, not least of all because of the way prosecutors have scaled back and simplified their case.

Prosecutors have dropped several of the most complicated charges — racketeering, in particular — and have reduced their case to 20 counts, including attempted extortion and bribery. In an opening statement, Christopher Niewoehner, an assistant U.S. attorney, took pains to define for jurors even the most basic concepts — governors sit at the top of the power structure in state government; campaign dollars are separate from official state finances; wiretaps are approved by judges.

—Monica Davey, The New York Times



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LETTERS TO THE EDITOR

We do connect!

Recently, one of my very close friends from back home (who is weighing different undergraduate schools right now) shared a post from a popular online forum with me. The post said that MIT professors do not connect with undergraduates very well. For days, it left me pondering and talking with peers and upperclassmen about their experiences. Finally, on April 13, I got to meet the Chancellor, W. Eric L. Grimson PhD '80, face to face and decided on a definitive answer to this particular concern of my friend.

I shall start with a story from Chancellor Grimson: Just before Susan Hockfield joined the administration as the President of MIT, she met up with all the departmental heads individually. The first question she asked everyone was, "What's on your mind right now?" Surprisingly enough, each and every head had the same issue on their mind; they all replied, "undergraduates." That all the departmental heads of this huge research engine think undergraduate studies to be the

most important issue on hand, says something about our connection with faculty and staff. The same thing is reflected when freshmen, right on their first semester, get to take classes from Professors Eric S. Lander, Robert A. Weinberg '64, Arthur P. Mattuck, and many other awesome teachers.

Almost all the students I have talked with on this issue agreed on the wonderful connection between undergraduates and the faculty. Their opinion is that if somebody wants to connect, he or she can definitely connect. First, professors are always available right before and right after lectures. I have never seen them turn students down, and they're willing to talk about academics or life in general. Professors also have office hours, when a student can easily get to know them. I personally know professors who arrange pizza-forums for their undergraduate students.

The Undergraduate Association (UA) has an amazing faculty dinners program. Undergraduates form a group of 5–6 people, invite a professor to dinner, and get reim-

bursed by the UA. There are even frequent occasions when various departments have events and fairs where students mingle with professors on a personal level.

Another great way to connect with faculty is UROP-ing. Eighty-five percent of the undergraduate student body participates in active, ground-breaking research work with faculty and that grows a really good bond between both the sides.

A senior at MIT was sharing her experience with me; she wanted a recommendation letter from a professor during her sophomore year. The semester had just begun and the professor really did not know a lot about her. Still the professor did not say "no"; he actually took time to get to know the student and wrote her an amazing recommendation letter (the way she lit up while talking about the letter speaks for its awesomeness).

So, we do connect! All the amazing opportunities are there for us. We just have to go and pick them up.

ck tnem up. Nazia Chowdhury

Keep the Bush tax cuts

Our tax system should be lower, broader, and simpler

By Keith Yost

STAFF COLUMNIST

Deadweight loss triangles are a tough concept to explain to laymen. They require discussions of marginal cost and benefit, of incidences and elasticities, and of Pareto optimalities. Perhaps that's why, in the 10 years since passage, the mainstream media has altogether forgotten the reasonable motivations behind the Bush tax cuts and substituted a narrative of its own. Today the airwaves are filled with serious men touting the ridiculous notion that the Republicans passed the tax cuts in order to give money to their favorite class, the ultra-wealthy.

As difficult as it may be for non-economists to grasp, the rationale behind the Bush tax cuts cannot be lost to history. Now, more than ever, the general public needs to understand the basic considerations that underlie sound tax policy, and Democrats need to understand that their opponents are sensible, data-driven people, not the oafish, ideological strawmen they have been made out to be.

So here it is, in 500 words, the economics of taxation:

People respond to incentives, and they are most responsive to incentives that act at the margin of an individual's decision making — that is, incentives are most likely to change an individual's decisions when they change the payoffs between an individual's first-best and second-best choices. If you raise or lower the rewards for doing something, individuals will do more or less of it respectively, and in particular, if you increase the tax on an individual's marginal dollar of labor income, he will respond by working less, taking jobs that compensate with non-taxable rewards, and hiring others to find loopholes and reduce the amount he has to pay the government.

By distorting people away from their first-best choices, taxes create what we call a deadweight loss. The size of the deadweight loss represents the degree to which the choices an individual makes in the face of taxation are less optimal than their original ones. Deadweight loss is both a reduction in the resources available to society and a misallocation of existing resources.

The extent to which an individual responds to taxation is called his or her elasticity of taxable income. An elasticity of taxable income with respect to the marginal tax rate (henceforth called the elasticity of taxable income, or ETI) of 0.5 would mean that for each 1 percent increase in an individual's marginal tax rate, he or she would respond by decreasing taxable income by 0.5 percent. Ceteris paribus, raising the marginal tax rate of an individual with a high ETI will create more loss to society per dollar of revenue collected than taxing someone with a low ETI.

Moreover, not all increases in tax rates are increases in an individual's marginal tax rate. Increasing the tax on a citizen's 10,000th dollar of income will distort the decisions of those making \$10,000 per year, but the tax will be paid by everyone making more than \$10,000 per year without significantly distorting their behavior.

And finally, not all deadweight loss is incident on the individual being taxed. Imagine a hospital, which produces healthcare through the combination of nurses ("lowquality" labor), doctors ("high-quality" labor), and medical equipment (capital). The productivity of each input is dependent on the availability of the other inputs — a hospital without medical equipment means that the doctors and nurses will have very low productivity, a hospital without nurses would mean very inefficient use of doctors and equipment, etc. If income taxes are raised on high-quality laborers, it is not just the high-quality laborers that will suffer anyone whose labor resources are complementary to those of professionals will also

An ideal tax policy is thus the product of a complex but solvable equation, which uses the relative weight that society assigns to the well-being of each income class, in combination with a set of relevant economic parameters, to produce an optimal set of tax rates.

So what does this mean for the Bush tax

In part, Republicans pushed for tax cuts on the upper class because unlike Democrats, who place value on equalizing income, Republicans place value on letting individuals keep what they have rightfully earned. Their taste and distaste for the tax policy was and is, to some degree, a product of intractable philosophical differences. But the Republican call for tax cuts was also the result of considerable empirical evidence which suggested that the upper class had much higher ETIs than the middle class, and that the government was causing undue societal harm through its tax policy.

A good example of this empirical evidence is a 2000 paper by Jon Gruber and Emmanuel Saez, The Elasticity of Taxable Income: Evidence and Implications. Gruber and Saez estimated that the ETI for those making \$10,000 to \$50,000 per year was 0.18, the ETI of those making \$50,000 to \$100,000 was 0.11, and the ETI for those making above \$100,000 was a whopping 0.57. The rich, to use someone else's turn of phrase, were "going Galt," and contrary to Democrats like Barack Obama, who consider harming the rich to be a good in-and-of-itself, Republicans see them as Americans too, worthy of being considered in a utilitarian summation of the nation's collective welfare.

That the upper class is more responsive to taxes than their middle-class peers is unsurprising — deadweight loss increases non-linearly with the marginal tax rate, with higher tax rates causing more-than-proportional losses. The rich face the highest marginal tax rates in the nation, and those individuals making more than \$100,000 per year, even after their tax cut, are responsible for five-sixths of the total income tax collected by the federal government.

Republicans continue to advocate for a lower, broader, and simpler tax code, not just because they place less value on income redistribution, but because they are doing the math and noticing that such a tax system could raise just as much revenue at a far smaller cost to society. The Democrats, by contrast, have offered nothing more than a blind application of moral preference. They dislike the rich, and their conversation ends there.

Our tax policy must be formed from sterner stuff than populist demagoguery. If Democrats cannot pull out their calculators and tackle reform with the same technocratic vigor that Republicans have, the voters should turn them out of office.

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North Korea's people are starving, and they need our help The US and South Korea should not withhold humanitarian aid to further political ends

By Andy Liang $STAFF\ COLUMNIST$

Former President Jimmy Carter recently made a three-day visit to assess North Korea's continuing food shortage. He returned charging the U.S. with worsening the shortage by withholding food aid to millions in North Korea. Carter sees this situation as a human rights violation. Understandably, the former president would not want any person to starve. Unfortunately, many critics want to keep economic sanctions in place and food shipments minimal. They believe that repressive governments such as North Korea's should not be given aid. But peanutman Jimmy Carter sees it in a different light; millions should not have to suffer for the North Korean government's actions.

Currently, 3.5 million of the 24 million people in North Korea are classified as "very vulnerable" to critical starvation, as evaluated by a recent United Nations study. Poor yields from crops, flooding, and a harsh winter have led to these dire conditions. The United Nations World Food Program stated that the government food supply will dwindle, with the average amount dropping from 1,400 calories per day to only 700. Despite worsening conditions, many countries, including the U.S., are joining South Korea in restricting food aid from the North. Currently, European countries continue to assess how to act, and North Koreans continue

But sympathizers of North Korea should know that food aid delivery may hold political risks. Critics of food aid purport that since North Korea has an inherently unproductive economy, the country may rely on international assistance to avoid addressing economic reforms. Moreover, the food imported to Pyongyang — meant to feed the starving millions - may instead be redistributed by North Korean officials to troops. But these concerns can be mediated by close inspection of food transport.

Does North Korea deserve pity? Not at all. Kim Jong-Il has been living in luxury, centralizing the nation's wealth to himself and government officials instead of revitalizing the agriculture budget for North Koreans. Jong-Il has not relaxed the North's nuclear weapons program and welcomes weapons sales. Just last year, North Korea allegedly sank the South Korean Cheonan warship, killing 46 sailors. And six months ago, Pyongyang forces shelled the Yeonpyeong Islands. The North Korean government has certainly committed terrible atrocities, but citizens should not be held responsible for their government's

Inclusion of our politics in humanitarian assistance decisions will only prevent needed aid from reaching those in need of it the most.

We need to keep in mind that humanitarian efforts should be kept separate from foreign policy. Help should be available everywhere. Japan, Syria, Libya, and any other disaster-stricken country needs and deserves aid. Inclusion of our politics in humanitarian assistance decisions will only prevent needed aid from reaching certain countries — there is nothing humanitarian about that.

In 1995-1996, the U.S. was the second leading contributor of aid to North Korea, after China. Back then, the U.S. sent aid because North Korea had suffered from flooding, internal industrial decline, and breakdown in food distribution. The flooding destroyed over 350,000 hectares of arable land, approximately 1.5 million tons of grain, and displaced 500,000 people. The flood also destroyed bridges, roads, and homes, with total damages estimated at \$15 billion, according to official estimates. The disaster heralded a nationwide famine that lasted nearly a decade. After the flooding, food rationing went from 458 grams to 200 grams — the equivalent of only a handful of food. Some remote areas of North Korea did not receive any food supply at all. The death toll of the famine is anywhere from 900,000 to 3.5 million.

To deprive the millions starving in North Korea from food aid today would be to make that same mistake again.







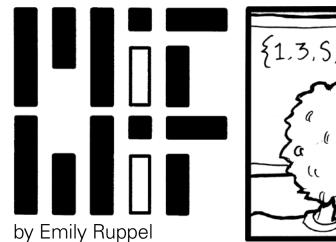




Do you want to be a part of starting a new Tech department?

The Tech is looking for bloggers.

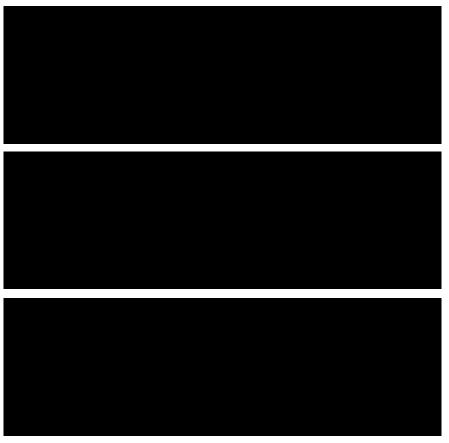
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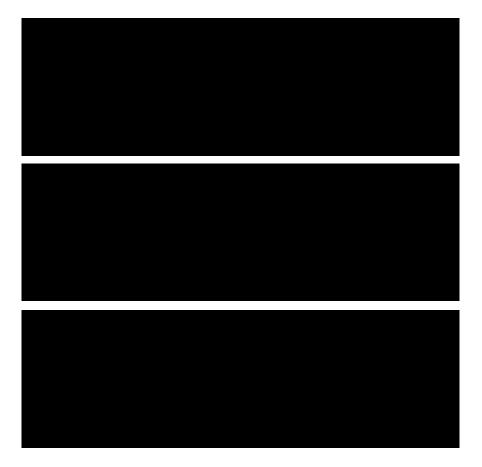






Dilbert by Scott Adams





Crossword Puzzle

Solution, page 15

ACROSS

- 1 1988 tennis Grand Slam
- winner 5 Partner of alas
- 10 "City of Seven Hills"
- 14 Sitcom named for its
- country star
- 15 Supple 16 French state
- 17 Cupid
- 18 Hope of one placing a personal ad?
- 20 Camera bag accessory
- 22 "Carmen," e.g.
- 23 Quite large
- 24 In a while
- 26 Peruvian worshiper?
- 30 "... the two shall be _ "Wedding Song" lyrics
- 31 "Sweet Caroline" singer Diamond
- 32 Krazy of comics
- 35 Delighted
- 36 Former Alaska Territory capital
- 38 Baked beans, e.g.
- 39 Collector's goal

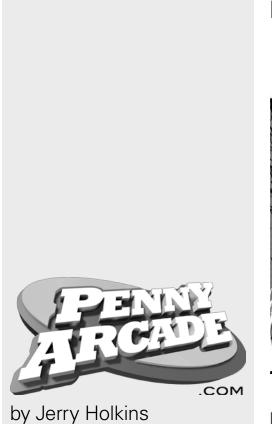
- 40 II __: Mussolini
- 41 Talk show host Gibbons
- 42 Knock a motorcycle daredevil flat?
- 45 One you won't find in a
- foxhole?
- 48 Prepares to shoot 49 Bank claims
- 50 Ready
- 54 Kid going nuts with building blocks?
- 57 Insolvent S&L company
- 58 Roman road
- 59 Die down
- 60 Novelist Hunter
- 61 One and only
- 62 Hotel conveniences 63 Archaeology projects

DOWN

- 1 Austria's second largest city
- 2 San __, Italy
- 3 Peek-_
- 4 Agricultural worker
- 5 State without proof 6 Train maker in the National Toy Hall of Fame

- 7 Dirt bike relatives, briefly
- 8 Friend of Fidel
- 9 Prefix with plunk
- 10 Grain cutter
- 11 Playful swimmer
- 12 Computer shortcut
- 13 Revolutionary Allen
- 19 Traveler's haven 21 Auto mechanic's job
- 24 Onion relative
- 25 New Balance rival
- 26 Falls behind
- 27 Maui or Kauai
- 28 Barrier at a zoo
- 29 Big name in chips 32 Chicken __: deep-fried dish
- 33 Wood-shaping tool
- 34 Greenish blue
- 36 Navigators and Explorers
- 37 "Cool" rap artist? 38 Couldn't make up one's
- 40 Belief in a non-intervening God
- 41 Looking fatigued
- 42 Poe's "rare and radiant maiden"
- 58 60
- 43 Self-defense method
- 44 Family reunion attendees
- 45 Chalmers's business
- partner 46 Link with
- 47 Philosopher who was a pioneer of German
- idealism
- 50 Chanteuse Edith
- 51 Shankar with a sitar
- 52 Cyberzine
- 53 Pressures for payment
- 55 Battery buys
- 56 Cavs' and Mavs' org.

Tuesday, May 3, 2011
The Tech 7



and Mike Krahulik

Editorializin



The Song of Something Something





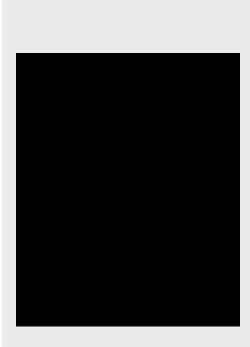


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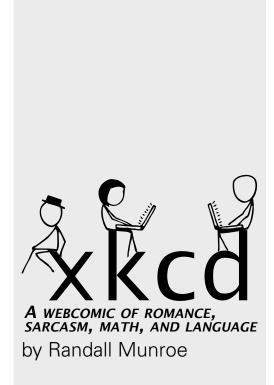
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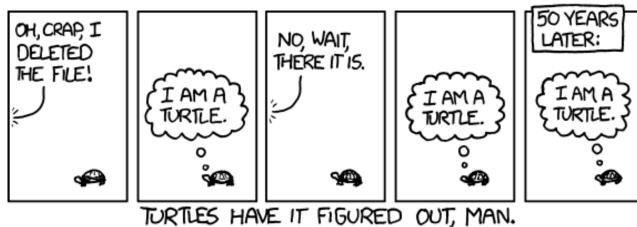








Turtles



You're a turtle!

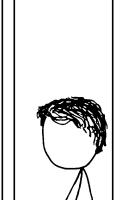
Etymology











For some reason, my childhood suspension of disbelief had no problem with the fact that this ancient galaxy is full of humans, but was derailed by language. There's no Asia OR Europe there, so where'd they get all the Indo-European roots?

Sudoku I Solution, page 17

		7		6				
6						2	3	
6 2 3	4		8		5		6	7
3						7		4
	1						8	
7		8						6
4	7		3		9		1	2
	2	9						3
				1		4		

Sudoku II Solution, page 17

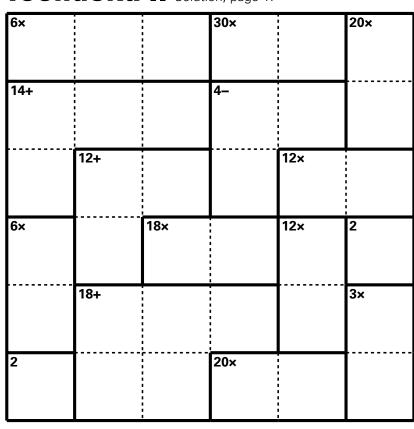
			1	2	4		5
		9		3	7	1	
4	2					9	
				4		6	
9			3	8			4
	6		7				
	6 3					7	9
	4	5	9		2		
7		8	2	1			

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Techdoku I Solution, page 17

360×	i	36×	į	i
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Techdoku II solution, page 17



The prosecution of genius

Breaking the Code gives Alan Turing the recognition he deserved half a century ago

The lights rise in the black box at the Central Square Theater. Alan Turing (Allyn Burrows) speaks nervously with the constable (Dafydd Rees). He is reporting a personal theft — committed, we'll discover, by a lover many years his junior. The losses themselves are trivial — clothes, half a bottle of sherry — but are reported out of principle. It is principle, and idiosyncrasy, that defines Turing. He is a man unable to be untrue about his ideals — whether they pertain to science, mathematics, or love.

Turing's honesty was his undoing. Upon disclosing his homosexuality to the police, Alan Turing, the war hero responsible for breaking the German Enigma codes, would be convicted of gross indecency. He was ordered to take high doses of estrogen as a means of chemical castration — "I'm growing breasts," he remarks woefully in the play — in lieu of prison. Two years later, Turing took his own life.

Hugh Whitemore's *Breaking the Code* is a testament to a genius, a shaming a society that let him suffer in solitude, and, above all, a eulogy to a trailblazer who made the world safer for the unique, the original, and the forward-looking.

But the lessons of *Breaking the Code* are not merely funeral rites, and the produc-

tion at the Central Square Theater does a good job pointing out that Turing's scientific struggles are the struggles of all scientists and that his romantic struggles are still felt by homosexual people today. The use of a single actor — Danny Bryck — to play all of Turing's lovers lends them all a

Turing is a man unable to be untrue about his ideals — whether they pertain to science, mathematics, or love.

very archetypical quality. The play's design is nonchronological and shifts between Turing's middle age and his youth, but the production eschews makeup to mark these changes. Through Turing's life, we see the old, tired, somber Turing. It is as if we are seeing his interior throughout — without the distractions of collagen, even the young Turing is struggling and tired, weary of making the world around him understand what he sees so clearly.

—Samuel Markson

Breaking the Code, a play about mathematician and computer science visionary Alan Turing, strikes close to home. In the happier scenes, Turing — as portrayed in Central Square Theatre's production of the play - looks as if he might step off the stage and out the door, walk down the street into the Miracle of Science, and strike up a discussion over the ramifications of quantum algorithms on computational complexity theory. These are the moments when the character of Turing is pleasantly reminiscent of your best friend in Course VI: quantitative to the point of exasperating his mother, eager to tell you how computers work even if you're just trying to eat lunch quietly, happy to fix your broken radio, and socially awkward in the most endearing manner possible.

Yet here is a man gifted with logic so pure and ethics so selfless that he confesses his homosexuality to the police as easily as he articulates the difference between soundness and completeness of mathematical proofs. The miracle of Allyn Burrows' performance as Turing is that he manages to be both familiar to us as a computer nerd of the highest caliber and completely astonishing as a man victimized by his own reason. Sure, Turing may be related to the guy down the hall at CSAIL as the

Breaking the Code
Directed by Adam Zahler
April 7 - May 8, 2011
Central Square Theater

Neanderthals are to Homo sapiens, but in some deeper sense he's a complete alien to most of us. Who are we to understand the loneliness of an underappreciated mathematician whose life's work seems useless to nearly everyone he meets? Or the frustration of losing his career because of his sexual orientation? Or the horrors of undergoing forced hormone treatment in order to prevent him from committing the alleged crime of homosexuality?

Ultimately, *Breaking the Code* is a tragedy that pushes us to question our own ethical consistency as scientists and mathematicians as carefully as Turing once considered the consistency of formal systems of logic. At the least, it makes us grateful to live in a time when Alan Turing has finally received the completeness of recognition he deserved.

—Yan Zhu

MOVIE REVIEW

Forget Jason Bourne — it's time to meet *Hanna*!

Joe Wright's first thriller is brilliant and suspenseful, like Doug Liman's *The Bourne Identity*

By Philipp Diesinger

STAFF WRITE

Hanna opens with some beautiful panoramas of the beautiful, snow-covered remote wilderness of Finland. In this silent. almost enchanted landscape, a girl — later introduced as Hanna (Saoirse Ronan) hunts and eventually kills a stag, demonstrating some unusual skills for a 16-yearold. Soon it becomes clear that Hanna has mostly been living alone with her father Erik (Eric Bana). Erik, a former CIA agent, has been training his daughter her entire life to become an assassin. The two have been hiding from civilization since the day she was born, and Hanna's only knowledge of the outside world comes from the languages and information that her father teaches her from books. This knowledge remains very abstract to the girl, though. In one scene Hanna asks her father about the sound of music - she knows the definition of "music" from an encyclopedia but has never heard any. Ronan lists this curiosity as one of her favorite aspects of her character: "We meet her as she goes out on her own, and when she does she is fascinated by everyone and everything she comes across. My favorite quality of hers is that she is non-judgmental; she shows an open mind to, and a fascination with, everything."

Later, we learn that Hanna is the result of a secret CIA project to genetically enhance embryos to improve their muscle strength, stamina, and reflexes while suppressing their ability to feel fear and empathy. The agency terminated the program at some point, and the agent in charge, Marissa Wiegler (Cate Blanchett), ordered all the children killed. Erik saved Hanna and has been hiding her ever since.

One night Hanna approaches her father and tells him that she is ready for her mission. He reveals a hidden box with a transmitter and explains that if she activates it, the CIA will come and find them. He makes it very clear that Marissa will try to kill Hanna when the device is activated; the only escape is to kill the agent first. Since Hanna is the only person who can get close enough to Marissa, she will have to do that job. The girl thinks for a while, finally deciding to activate the transmitter. Thus begins an epic chase across Europe, and the supposed hunters will soon become the prey.

Wright's film is yet another movie featuring a female assassin. On the surface, Hanna might appear comparable to the female characters of *Kill Bill, Kick-Ass* or *Sucker Punch*, but Hanna actually contributes an-

other dimension to this type of character. Hanna is distinct because she is very serious and shows no comical characteristics. Saoirse Ronan — who suggested Joe Wright as director in the first place — performs incredibly well despite having almost no previous experience in the thriller and action genre. It is impressive to see how different the character Hanna and the 17-year-old Irish actress are.

Hanna not only feature well-chosen actors, but is also an overall solid production. The movie offers distinctively atmospheric or surreal settings, like bustling towns in northern Morocco and gypsy camps in southern Spain, contrasting the silence of the remote wilderness of Finland. In one particular scene Marissa chases Hanna across a run-down Little Red Riding Hood-themed rollercoaster. When they finally meet, Marissa steps out of the shadow of the maw of a huge wolf statue, illustrating that she is the ultimate villain in this movie.

Hanna also features great cinematography with stunning tracking shots and a fantastic soundtrack by The Chemical Brother, who also contributed to Darren Aronofsky's Black Swan.

Hanna's background story is revealed slowly and subtly during the movie. Whenever the film slows a bit between well-cho****

Hanna

Directed by Joe Wright

Starring Saoirse Ronan, Cate Blanchett, and Eric

Rated PG-13

Now Playing

reographed action sequences, the tension is maintained by developing the story and answering some of the audience's questions. The amazing script was originally developed by Seth Lochhead while he was still a student at Vancouver Film School, and later refinements were assisted by David Farr.

Joe Wright's film is a brilliant, suspenseful thriller, with unique characters, unexpected twists, well-crafted action sequences, an intelligent story, and amazing actors. If you liked The *Bourne* Trilogy and you want to procrastinate a little while preparing for finals, you should definitely go and see this film. It's time to meet *Hanna*!

ALBUM REVIEW

Arresting, thoughtful, accessible

The Great Deep provides an escape to serenity

By Jonathan E. D. Richmond

ADVISORY BOARD

I am sitting on an American Airlines flight when they have just served the same vile plastic egg-y mess they have always dished up for so-called breakfast. Untouchable — I simply fail to understand why they persist in throwing such muck at their passengers. The 777 is surprisingly noisy, at least where I am sitting. But I have a pair of noise-canceling headphones, and I have *The Great Deep* — a new album from Duo LiveOak — within reach.

Within a minute, the atmosphere is transformed into gentle contemplation, blood pressure is reduced, and the most nutritious food for the brain induces a feeling of serenity.

Composer Frank Wallace and singer Nancy Knowles were amongst the first artists I encountered when I first came to MIT as a graudate student. In the 1980s, Wallace and Knowles performed a repertory of early Spanish music with great insight as well as

drama. The duo has continued their focus on drama as they have moved to a new career centered on Knowles' singing compositions written and accompanied by Wallace, her husband, on guitar.

Wallace's music is cleanly modern while drawing on ancient themes. In a talk he gave at a recent Keene State College symposium, the composer emphasized the necessary connection between the guitar and the human voice. He understands that the guitar is itself one or more dramatic characters, sometimes adding characterization to the vocalist, at other times confronting her with fresh ideas to reflect upon. Even when there is no human voice — as in the purely guitar composition "Paca La Rosetta" performed at an April Keene State concert — the guitar seems to sing. The piece is rhythmic and driven, yet also lyrical and reflective.

"Ovejita," with words from the poet Federico García Lorca, is an evocation of madness. Wallace's music somehow suggests a waterborne journey, oars propelling the character forward, an old woman overcome by insanity as she sings to a lamb she imagines to be her child. Knowles' singing is brilliant — her sharp characterization and perfect sense of timing freezes the mind in rapt attention. Wallace's guitar seems so gentle, but also urgent. Knowles projects imagery of a lost soul hanging on to the only beauty she can envision — a lamb reminding her of the closeness of a child and temporarily washing away the reality of her aging years, decline into madness, and eventual death.

Not on the CD, a new composition titled "Epitafio a un Pájaro" ("Epitaph to a Bird") was premiered at Keene State. The two guitars of the piece (Jose Manuel Lezcano joined Wallace on stage) are joined by a flute (played by Jennifer Yeaton-Paris) that follows the soul of the bird with an otherworldly gentleness. Knowles showed great flexibility in her singing: an actress able to convey the idea of life in death, crossing boundaries between mournfulness, love, and an inner celebration of a life departed. This is a memorial to a bird, but the strik-

The Great Deep
Duo LiveOak
Released January 11, 2011
Gyre Music

ing music Wallace has written has universal meaning.

For the first measures, I was trying to identify the sources of his inspiration — was it the Renaissance? Benjamin Britten? Then I let go of the distraction of thought and fall into the abyss of a musical creativity that has a voice of its own, that takes us on a contemplative journey through not only the soul of a bird or even humanity, but of the state of being that is the planet earth. Wallace is one of our age's truly important composers, his music at once arresting, thoughtful, accessible, revealing and — protected from the outside world by my noise-canceling headphones — restful.

10 THE TECH **TUESDAY, MAY 3, 2011**

EXHIBIT REVIEW

And then there was glass

Chihuly's latest exhibition celebrates light, dark, and color in installation art

By Kathryn Dere ARTS EDITOR

Dale Chihuly has been working with glass for over 40 years, and his newest collection of glass sculptures is now on display at Boston's Museum of Fine Arts. Chihuly: Through the Looking Glass is not your typical art exhibition, it's a celebration of installation art and fragility at its very finest. Of course, before we give Chihuly all the credit, you should know that he does not work alone. A dislocated shoulder from a 1979 bodysurfing accident left him unable to hold a glassblowing pipe; since then, he has relied on a team of glassblowers to carry out his artistic plans. Chihuly classifies his role as "more choreographer than dancer, more supervisor than participant, more director than actor." The result of these artistic collaborations is an oeuvre focused just as much on presentation as craftsmanship.

Chihuly: Through the Looking Glass is a surreal journey — part exploration down the chocolate river to Candy Land, part moving walkway past the Crown Jewels, part diving at the Great Barrier Reef. Persian Wall greets exhibition viewers at the bottom of the stairs that lead to the Gund Gallery, with multiple waved discs of colored glass climbing up the wall from the floor like smooth barnacles. Strategically placed lights reflect colors of warm reds, oranges, and yellows onto the wall, reinforcing the impression that we are about to enter another world.

Inside the actual gallery Scarlet Icicle Chandelier assumes the role of a formidable

Chihuly: Through the Looking Glass

Museum of Fine Arts, Gund Gallery

April 10 - Aug. 7, 2011



Chihuly's Neodymium Reeds is now on display at Boston's Museum of Fine Arts.

giant sea urchin as it casts spiky shadows on the walls; around the corner, Ikebana Boat launches the entire journey. Ikebana is the Japanese art of flower arranging, and a rough wooden boat overflowing with bright swirls and twists of glass floats on a black, mirrored piece of Plexiglas. Chihuly attributes his inspiration for this work to a 1995 visit to Finland: "I got the idea of throwing some of the glass in the river, and I wanted to see how easily the glass would break or if it did break." Most of the glass didn't break, and the vision of glassfilled boats coming up the river manned by Finnish teenagers translated into this piece.

This overwhelming beginning of the exhibition leads to expectations of complete immersion in a strange world that plays on not only the relationship between glass and color, but also light and dark; merely peeking into the delicate world of elegant shapes is not an option. Toward the middle of the exhibition is Mille Fiori (A Thousand Flowers), a darkened room filled with a glowing, 60-foot-long expanse of colored glass. It's a veritable library of Chihuly and his studio's glassblowing techniques: Pink and orange fingers stretch upwards like anemones. Green and black figures wriggle like sea snakes anchored in the sand. A twisted mass of flaming reds and vellows struggles to reach the top. The room that houses Persian Ceiling, with its gentle blocks of color and dappled, light-filled entirety, is almost a welcome release from Mille Fiori's air of unsettled magic. Above, a glass ceiling supports colored pieces of glass piled on top of each other — undulating circular forms, an octopus, miniature humanoids.

Of course, the entire exhibition does not consist purely of loud burst of color and melodramatic lighting: In the Northwest Room, Chihuly juxtaposes the rough fibers of genuine Native American-woven baskets with the delicately translucent, almost shelllike Tabac Baskets. But compared to the rest of the exhibition, these subtler pieces are perhaps at a disadvantage — they are too quiet. Is it possible, then, to find the line between pure sensitivity and captivating installation?

In Neodymium Reeds on Logs, Chihuly has created a perfect end to the exhibition. Pure luminosity comes in the form of smooth, lavender-colored glass rods that almost reach the ceiling. The peeling birch rods in which they are inserted birthday-cake style, are an unlikely but pleasing complement. This is the combination of nature and fantasy that we have been seeking all along. The journey has ended, but remnants of the glass dream world



Inference of Protein Structure and Function

Abstract: The study of the structure and function of proteins raises many problems that offer challenges and opportunities for computational and statistical research. I will overview my experiences in several such problem domains, ranging from domains where off-the-shelf ideas can be fruitfully applied to domains that require new thinking. These are: (1) the identification of active sites in enzymes; (2) the modeling of protein backbone configurations; (3) the prediction of molecular function based on phylogeny; (4) joint inference of alignment and phylogeny.

Biography: Michael I. Jordan is the Pehong Chen Distinguished Professor in the Department of Electrical Engineering and Computer Science and the Department of Statistics at the University of California, Berkeley. His research in recent years has focused on Bayesian nonparametric analysis, probabilistic graphical models, spectral methods, kernel machines and applications to problems in statistical genetics, computational biology, signal processing, information retrieval and natural language processing. Prof. Jordan has been named as a Neyman Lecturer and a Medallion <mark>Lecturer</mark> by the Institute of Mathematical Statistics (IMS). He has received the ACM/AAAI Allen Newell Award in 2009, the SIAM Activity Group on Optimization Prize in 2008, and the IEEE Neural Networks Pioneer Award in 2006. He is a Fellow of the American Association for the Advancement of Science, a Fellow of the IMS, a Fellow of the IEEE, a Fellow of the AAAI and a Fellow of the ASA. In 2010, Prof. Jordan was named to the National Academy of Engineering and the National Academy of Sciences.

Hosts: David Gifford & Tommi Jaakola, CSAIL



At noon on Saturday, an organized "flash mob" convened in Lobby 7, singing and dancing to a selection of pop and dance music. The flash mob required advance sign-up and rehearsal attendance.



An artist directed the painting of a mural on the sidewalk near the corner of Ames Street and Main Street outside the newly-opened Koch Institute on Friday afternoon.

A more open MIT 105 students, 95 staff volunteer

Open house, from Page 1

Lagacé. "Expect to see this happening more often."

Mindell echoed Lagacé's sentiment. "We always knew that if [the open house] went well, it would be on the table to do on a more regular basis," he said.

According to Elizabeth C. Young, also an open house cochair, 105 students volunteered at least three hours to help with the event. In addition, 95 MIT staff members, not including those who worked with departments to host events, volunteered to staff information tents, said John M. McDonald, director of enterprise services. Information tents were located at three locations across campus.

Paul Lagacé described the day as a 'tremendous success.

Of the 20,000 visitors, Mindell said that - anecdotally it seemed many visitors came from further than Boston and Cambridge, like the cities' surrounding suburbs. MIT has collected more detailed information about open house visitors, which is not yet available.

On Saturday, families and children were ubiquitous. Mindell noted that "MIT and [President] Susan [J.] Hockfield are concerned about K-12 STEM education," and that the open house was a way to make science and technology more accessible to grade school students.

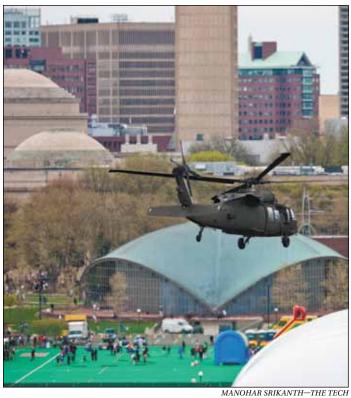
MIT's annual spring repairs and campus improvements happened on a "faster timescale" than they normally do in order to prepare for the open house, Lagacé said. Repairs to the Student Center steps were scheduled to be completed by last Saturday; in addition to re-pouring the steps, new handrails and benches have been added.

The open house coincided with the beginning of the Cambridge Science Festival, an annual week-long science and technology exposition hosted jointly by MIT, Cambridge City, and Harvard, among other institutions in the area.

The value of the open house, says Mindell, is not limited to visitors. "The feedback we keep getting is that there's a great desire for people on campus to feel like they're part of the larger Institute," he noted.



A team from the Research Laboratory of Electronics helped open house guests build a simple DC motor using insulated copper wire and ferromagnets in the Stata Center Saturday afternoon.



An Army UH 60 Black Hawk helicopter visited Briggs Field Saturday afternoon for an inspection by MIT's Army ROTC.



Children curiously watch a soccer-playing robot demonstration at the Stata Center on Saturday afternoon.

12 THE TECH
TUESDAY, MAY 3, 2011

Decision influenced by definition of 'research'

Stem cells, from Page 1

"Two scientists brought this suit to enjoin the National Institutes of Health from funding research using human embryonic stem cells (ESCs) pursuant to the NIH's 2009 Guidelines. The district court granted their motion for a preliminary injunction, concluding they were likely to succeed in showing the Guidelines violated the Dickey-Wicker Amendment, an appropriations rider that bars federal funding for research in which a human embryo is destroyed. We conclude the plaintiffs are unlikely to prevail because Dickey-Wicker is ambiguous and the NIH seems reasonably to have concluded that, although Dickey-Wicker bars funding for the destructive act of deriving an ESC from an embryo, it does not prohibit funding a research project in which an ESC will be used. We therefore vacate the preliminary injunction."

Ginsburg was joined by Judge Thomas Griffith. Both judges had seemed to favor the government's side at oral argument, so their votes did not come as a surprise. Much of the decision was spent on the definition of the word "research," a subject that consumed scores of pages in the briefs submitted to the court.

One of the central questions of the case is whether current stem cell research that uses stem cell lines that were derived from embryos years ago qualifies as the same "research" as the original derivation. If it does, then the research is barred by Dickey-Wicker; if not, the research is legal.

The dissent by Judge Karen L. Henderson was "unusually strong," said Samuel B. Casey, part of the legal team for Sherley and his co-plaintiff, Theresa A. Deisher. Sherley and Deisher are adult stem-cell researchers who maintain that their grant prospects are harmed by the NIH's ability to fund human ESC research.

Henderson wrote that by "breaking the simple noun 'research' into 'temporal bits' [and] narrowing the verb phrase 'are destroyed' to an unintended scope ... my colleagues perform linguistic jujitsu."

She wrote that Sherley and De-

isher are likely to succeed on the merits of their lower court case, and thus the lower court did not abuse its discretion in granting the preliminary injunction.

'We conclude the plaintiffs are unlikely to prevail because Dickey-Wicker is ambiguous ... '

Casey said that the on the basis of Henderson's dissenting opinion, Sherley and Deisher are seriously considering appealing the three-judge panel's decision to an *en banc* panel of the entire circuit court. Such appeals are quite uncommon, and are usually lost, Casey said, but he feels they could prevail.

Casey said that overall, he was "sightly disappointed but not surprised" with the appeals court decision, noting that one cannot expect to hit a home run every time one is at bat.

On Friday, the White House said

that "today's ruling is a victory for our scientists and patients around the world who stand to benefit from the groundbreaking medical research they're pursuing." The Department of Justice said that they were pleased.

Francis S. Collins, director of the NIH, said in a statement that he was "delighted and relieved" by the decision. "This is a momentous day — not only for science, but for the hopes of thousands of patients and their families who are relying on NIH-funded scientists to pursue lifesaving discoveries and therapies that could come from stem cell research."

As has been true throughout this case, MIT did not comment on the decision.

Next steps

Now that the preliminary injunction has been dismissed, eyes are on the United States District Court for the District of Columbia, where the case is being argued on its merits. That court issued the preliminary injunction barring the research on Aug. 23, 2010.

Both sides have motions for sum-

mary judgement before Chief Judge Royce C. Lamberth of that court. Summary judgement is a request for the court to decide the case on the basis of agreed-upon facts that are already before it.

Casey said that the district court was likely to ask both sides to submit briefs outlining how the circuit court decision changes the case.

Because the majority of the appeals court panel concluded that the funding statute is ambiguous, Lamberth will have to consider that as he moves forward.

Of course, if Sherley and Deisher appeal the case to the circuit court *en banc*, then the lower court proceedings will likely pause again.

Case could reach Supreme

Either way, all involved are in this case for the long haul. Casey said that it was likely to reach the Supreme Court, noting that Sherley and Deisher would appeal there if they lost at the district and appellate levels, and that he thought the Department of Justice would do the same.

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Two groups apply for MEF

Emily Zhao '12, UA Finance Board chair, reported yesterday to the UA Senate that two groups asked for funding from the new Medium Events Fund (MEF), Finboard's newest allocation fund. The MEF was created earlier this semester with the intent of funding events that were too small for the Large Event Fund (LEF) and too expensive for student groups to fund on their own.

"The first funding period garnered fewer applications than we expect in future rounds, but was on par with expectations," Zhao wrote in an email to *The Tech.* "In fact, because it was such a new concept and for events so far in the future (July–December), I was not sure any groups would apply at all.

The two groups that applied

are the African Students Association and the Southeast Asian Service Leadership Network at MIT (SEALNet@MIT). The African Students Association was fully funded (\$792.61) for their fall freshmen barbecue event. SEALNet@MIT received \$1,500 out of their requested \$2010-2370 to host the Southeast Asian Cultural Night, which requires funding for dances, performances, and food-related booths. Full funding was not awarded on the basis that "they did not provide enough on the performances and they could probably get groups to perform

MEF will give out funds twice annually. The second round of MEF will happen in either October or November, according to Zhao.

—Robert McQueen

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14 THE TECH TUESDAY, MAY 3, 2011



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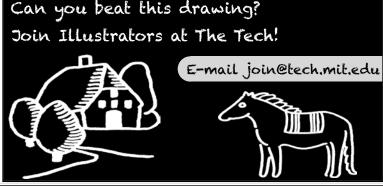
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The Sloan (Course 15) Course Bidding System (Sloanbid) Bidding Dates for Fall, 2011 Courses

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Mir

First time logging in? Use your MIT ID as both your log in and password. Follow instructions on the site to change your password or retrieve lost passwords. Once logged in, make sure and check that your information (i.e. program of study and graduation date) is correct.

medweb.mit.edu

Institute-wide bidding for Sloan (Course 15) subjects*:

Opens 9:00 a.m., Friday, May 13

Closes 5:00 p.m., Friday, May 20

Waitlist Round for closed Sloan (Course 15) subjects:

Opens 9:00 a.m., Wednesday, July 13

Closes 5:00 p.m., Wednesday, July 27

Section Swap Round for changing sections of pre-enrolled Sloan (Course 15) subjects:

Opens 9:00 a.m., Monday, August 1

Closes 5:00 p.m., Monday, August 8

Please contact Scott Alessandro, <u>salessan@mit.edu</u>, if you have questions regarding Sloan (Course 15) Course Bidding.

Successful bids will appear on your Registration Form on September 6 and will be posted on the bidding website as of July 13 -- write down your password to check results!

*For 15.011, 15.075, 15.279, 15.301, 15.305, 15.310, 15.501, and 15.516, you can sign up directly through WebSIS starting May 2^{nd} . It is not necessary to bid for these courses.

MIT now the new majority owner of Bose Corporation

By Hiawatha Bray

The Massachusetts Institute of Technology has just gone into the consumer electronics business — as the new majority owner of Framingham audio equipment maker Bose

Founder and MIT alumnus Amar G. Bose '51 has donated most of the stock in his privately held company to his alma mater. The shares don't come with voting rights, so MIT won't have any say in how the company is run. In addition, the school is barred from selling the stock. Instead, it will profit by receiving cash dividends whenever the company chooses to issue them.

A Bose spokesman declined a request for comment on the gift, and an MIT spokesman declined to estimate the economic value of the

revenue of more than \$2 billion.

"Amar Bose gives us a great gift today, but he also serves as a superb example for MIT graduates who yearn to cut their own path," said MIT President Susan J. Hockfield in

'Amar Bose gave us a great gift today.'

Susan I. Hockfield -PRESIDENT OF MIT

Bose, a former MIT professor, began experimenting with home audio equipment in 1956 and patented a number of innovations. He launched Bose Corp. in 1964 to bring his inventions to market. He remained on the MIT faculty until

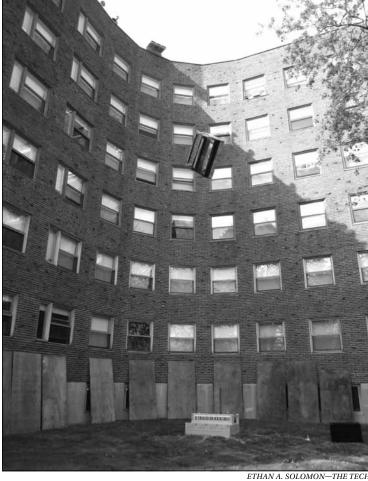
The company is best known for

donation. Bose Corp. reported 2010 its Wave line of desktop audio systems and its QuietComfort noisecanceling headphones. Bose also makes sound systems for cars, as well as large-scale audio products for use in stadiums and theaters.

Heather Joslyn, assistant managing editor of the Chronicle of Philanthropy, said it is not unusual for wealthy people to donate large amounts of stock to favorite causes or institutions. For instance, billionaire Warren Buffett has pledged to give away 85 percent of his shares in Berkshire Hathaway Inc. to a number of charitable foundations.

But Joslyn said she could find no other example of a company's founder donating most of its shares to a single university. "It does look like it's pretty unprecedented," she

This article was originally published April 29.



A decrepit upright piano sails off the roof of Baker House during the traditional Spring drop date celebration on Memorial Drive. The drop was held over a week after the April 21 drop date to coincide with MIT's

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16 THE TECH TUESDAY, MAY 3, 2011

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Shan Wu G

A gift to MIT from an alumnus raises questions

By Stephanie Strom

THE NEW YORK TIMES

The founder of the Bose Corp., a privately held company that makes high-end audio products, has donated the majority of the company to Massachusetts Institute of Technology, the university said last Friday.

But Amar G. Bose, who received his bachelor's, master's and doctoral degrees from MIT and was a professor there from 1956 to 2001, placed some unusual restrictions on the Bose shares he donated to the university.

While the shares give the university majority ownership, they are nonvoting and thus confer no control over the company and its operations. Nor can MIT sell the shares. It will receive dividends from Bose Corp., which Nathaniel W. Nickerson, a spokesman for the university, said in an email would be "used broadly to sustain and advance MIT's education and research mission.

While Nickerson said it was "a very significant gift," he would not discuss the financial details, including the potential value, saying that Amar Bose and Bose Corp. want to "keep details of financial matters confidential.

MIT officials, in announcing the donation, praised Bose's teaching and research.

"Amar Bose gives us a great gift today, but he also serves as a superb example for MIT graduates who yearn to cut their own path," Susan Hockfield, the university's president, said in an article on its website.

Amar Bose could not be reached for

But some tax experts said the gift and the lack of detail about it raised questions.

'We don't know much about the terms of this gift, but it seems like it clearly falls into a gray area that has been of concern to Congress," said Dean Zerbe, national managing director of the tax consulting firm Alliantgroup. "The university needs to be more forthcoming about the arrangements behind this donation so we can get a clear picture of what's going on."

The donation will be 'used broadly to sustain and advance MIT's education and research mission.

Roger Colinvaux, an associate law professor at Catholic University in Washington and previously a staff member of the Congressional Joint Committee on Taxation, also said the gift raised questions for him.

"If the shares truly can't be sold so that there is some restriction on the university's

ability to transfer stock, then it would suggest it is a contribution of partial interest only, which would not be deductible as a charitable contribution," said Colinvaux, who recently published an article in The Florida Tax Review that argues that the laws governing charity are outdated and inadequate.

But Erik Dryburgh, a nonprofit lawyer, said he did not see a problem with the gift.

"On its face, I don't see the abuse or potential abuses that were present in some of the more abusive gift transactions we saw in the past," Dryburgh said.

Zerbe and Colinvaux said the gift brought to mind various tax shelters involving charities that came under scrutiny during the time they worked in Congress.

Nickerson, however, denied that the gift was similar to those tax strategies.

"Further, it would not be appropriate for us to discuss the taxes of any of MIT's donors," he said.

Most of the tax shelters cited by Zerbe and Colinvaux involved an elaborate strategy in which privately held companies gave nonvoting shares to a charity and then, after a time, bought them back. The transactions attracted the attention of regulators puzzled by why donors would give nonprofit groups nonvoting shares, whose value — and thus potential for tax deduction — is limited by their nonvoting nature.

In 2003, the Senate Permanent Subcommittee on Investigations looked into such transactions and found that, in some cases, they were an elaborate way of using a charity's tax-exempt status to erase tax liabilities for the other shareholders of the company involved.

A charity involved in such a tax strategy would receive income from the company in proportion to the size of its holdings of nonvoting stock. But while that income was taxable, it was not distributed to the charity and stayed at the company to be reinvested.

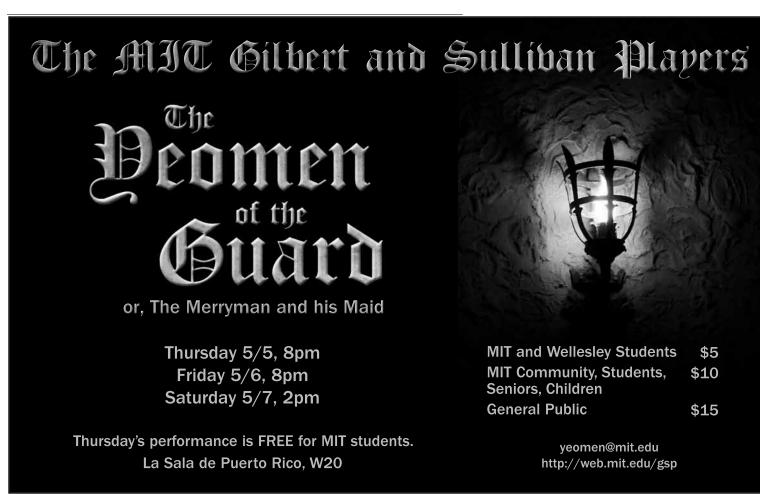
The charity did not owe taxes on the income, anyway, because it was tax-exempt.

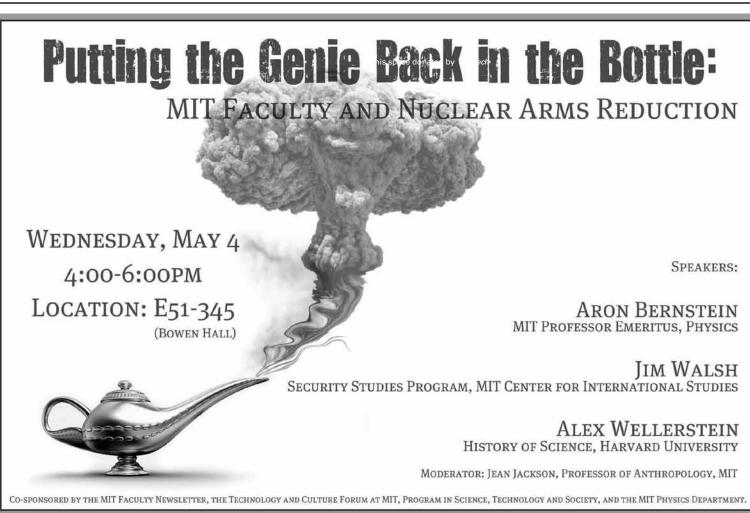
Later, the charity would sell the nonvoting shares back to the company at fair market value, and the company would distribute the income, tax-free, that had been associated with those shares among its other shareholders.

In other, similar cases, charities that received nonvoting stakes in privately held companies through gifts of nonvoting stock used large losses they had incurred on unrelated businesses to offset taxes for other shareholders. Dryburgh wrote a paper on that type of tax shelter.

In 2004, the IRS listed as "restricted" such transactions and denied deductions associated with them.

This article was originally published April





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Solution to Sudoku I

8	3	7	9	6	2	5	4	1
6	9	5	1	7	4	2	3	8
2	4	1	8	3	5	9	6	7
3	6	2	5	8	1	7	9	4
9	1	4	6	2	7	3	8	5
7			4					
4			3					
1	2		7					
5	8		2					

Solution to Sudoku II

3	7	6	1	9	2	4	8	5
5	8	9	6	4	3	7	1	2
4	2	1	8	7	5	6	9	
8	1	3	5	2	4	9	6	7
9	5	7	3	6	8	1	2	4
2	6	4	7	1	9	3	5	8
1	3	2	4	5	6	8	7	9
6	4	5	9	8	7			1
7	9	8	2	3	1	5	4	6

Solution to Techdoku I

from page 8

5	4	6	1	2	3
4	3	5	6	1	2
2	1	3	4	5	6
6		1		3	4
1	6	2	3	4	5
3	2	4	5	6	1

Solution to Techdoku II

3	1	2	5	6	4
4	2	3	5 6	1	5
5	3	4	1	2	6
1	5	6	3	4	2
6	4	6 5	2	3	1
2	6	1	4	5	3

■ PREFROSH — CLASS OF 2015

Finding the right match

CPW confirmed that MIT would be the best place for me

By Jessica J. Yang
CLASS OF 2015

Click. Check. Click. In the span of a few seconds, I went from being an undecided high school senior to a member of the MIT Class of 2015. As the confirmation screen loaded, I optimistically imagined attending an insanely difficult — yet rewarding — physics class, seeing a Saturday night show in Boston, or just hanging out with friends in a floor lounge, debating an insignificant topic with intricate precision. I began to really look forward to college.

I applied regular decision to MIT, and although I don't like to worry, I began subconsciously counting down the days 21 days before Pi Day - and admissions decisions. It seemed like the birds that chirped outside my window every Friday afternoon in February were telling me of March looming around the corner. Another time I paid \$14 for dinner with a friend — it's almost the 14th! Most torturous was when I needed to sell "pi-grams" (like candy grams) for a school club. I was constantly required to answer the question "When will the pigrams be delivered?" (Answer: in "x" days, on Pi Day). Each time I winced and wanted to hide under my 2010 calendar.

On the afternoon of March 14, I prepared 10 admissions status page tabs, preloaded with my username and password already typed in. My heart pounded as the

NIST official U.S. clock struck 9:26 p.m., and I clicked the submit button on my first tab ... then the second tab ... then the third tab ... then the fourth tab, which loaded. As soon as I saw the words, "On behalf of the admissions committee it is my pleasure to offer," I knew I was all set — that I had been good enough, that all those hours I had spent taking standardized tests and writing application essays had paid off, that all those hours I had spent worrying had been unnecessary. At 9:26:30 p.m., I celebrated by running around outside, submitted an order for super-supreme pizza, and began displaying symptoms of acute senioritis.

Choosing MIT was easy, as I had spent most of my childhood around scientists in Massachusetts and have always fantasized about attending. Eight years ago when my fourth grade teacher asked us about college, my rival at the time announced "I am going to Harvard!" I countered that I would go to MIT — which, by the way, "is way better." So here I am.

I was pleasantly reassured at CPW. Everyone was so kind, down-to-earth, and very passionate about their interests and pursuits — it was an inspirational experience. Every day I felt somewhat intimidated by the building of microscopes in a bioengineering lab, the projects at the cognitive sciences center, the complete scaled model of Cambridge and its railroads, the expressive murals on the walls

of East Campus, and all the vehicles and machines students built. Yet with each passing day I learned more and more, meeting amazing people and getting an increasing sense of belonging. I laughed when I found that an elevator in Simmons Hall plays music when the "2" and "><" buttons are simultaneously pressed, wishing I had thought of something like that. And one late evening some friends and I were exploring the halls when we ran into Edward J. Moriarty '76, an instructor from the Edgerton Center, and had a thoughtprovoking conversation about many interesting topics, including science education outreach for young students. He was working with public school students in Cambridge and Alaska; I lead high school students in bringing science programs to elementary schools in Maryland. I was amazed because I had just randomly — on my second day at MIT - met somebody who was passionate about the exact same thing as me!

I am not yet sure what I want to major in, but I am interested in biology, physics, economics, and education. In the summer, I'm planning on taking some more bike rides on some woody trails, continuing research in a biomedical research lab, and playing more soccer with the neighborhood kids. I'm incredibly excited and extremely appreciative that I will get to join the MIT community this fall.



My name is Jessica Yang, and I'm from Richard Montgomery High School in a suburb of Washington, D.C. For fun, I play recreational soccer, bake desserts, and teach elementary school kids science through my nonprofit, Kids Are Scientists Too, Inc. I also enjoy reading various manga, managing our high school newspaper, and watching House. I like simple things, like walking in the rain or sitting on a patch of grass and reading. I'm really excited about attending MIT — but next semester, I think I could substitute the grass with a snow chair.

PREFROSH — CLASS OF 2015

The road to comMITment

What makes the Institute the perfect fit?

By Callie C. McRee

CLASS OF 2015

From that fateful moment on Dec. 16 when I was accepted to MIT, I knew that I was in for a very different four years than most of my friends, should I choose to attend. The shock of getting into the college that I had always considered my dream school didn't wear off until several months later. However, as reality sunk in and I enjoyed the warm California winter and plentiful sleep of senior year, I started to wonder — was MIT truly where I wanted to go?

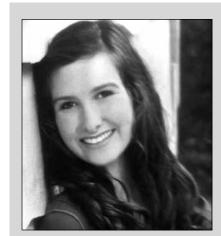
Once I was accepted, "MIT" quickly became my nickname in school - especially when I got an answer wrong in class, "Way to go, MIT," was definitely a favorite phrase. The idea that I might not go was preposterous to the majority of my friends. I knew. however, that it had to feel right. As I did my research, I came across article after article about the intense stress, sleepless nights, and ice-cold winters that came with an MIT education. Alongside those, however, came articles about the strong collaboration and brilliance of the student body, phenomenal research opportunities, and amazing faculty. Researching MIT suddenly made the idea of being "the stupidest person in the room" seem not only bearable, but oddly desirable.

I was growing more confident that MIT was the right place for me, but I was still waiting for CPW to confirm my thoughts. I can't say I was feeling too adoring of MIT when I got off my red-eye flight Thursday morning. Nor when I walked across campus to "Event with Food" at Senior House (I hadn't had breakfast yet) to find ... no food? Fortunately, by the time I had chugged the largest cup of coffee La Verde's sold and attended a successful East Campus barbecue, MIT was looking significantly better.

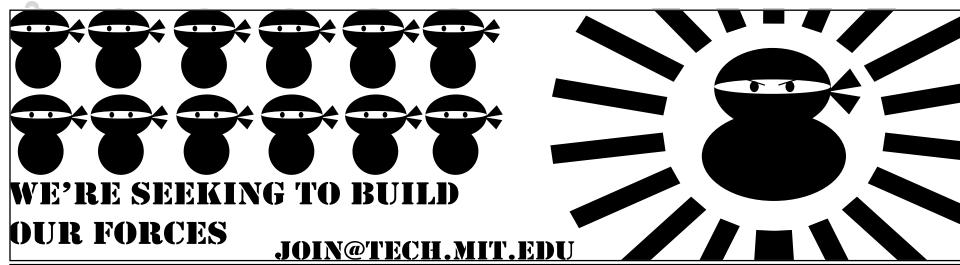
The opening ceremony that night was when I knew MIT was the perfect fit for me. By that time, the rest of the prefrosh had arrived, and as I looked around the auditorium, I was thrilled to think, "These are my classmates." We easily bonded over the nerdy jokes that Dean of Admissions Stuart Schmill '86 noted a good majority of us had written in the comment section of our mid-year report, and we clapped for our new favorite musical group — the MIT Logarhythms. The various displays by the student groups that performed that night really proved that the students' talents extend beyond academics. As a dancer, I was definitely thrilled to see this.

My good feelings for MIT continued when I woke up feeling revived after my four-and-a-half hours of sleep — the most sleep I got out of all the nights of CPW. By 3:30 p.m. that day, I took a detour to an Athena cluster to officially commit.

Many of my wiser friends had told me that any qualms I had about choosing a college would be settled when I visited the campus. I had a hard time believing this before I visited MIT, but it could not have been more true. Being on campus and meeting current and future students made me absolutely positive that MIT could not be a more perfect place for me. I'm aware that CPW isn't a very accurate portrayal of MIT during the year — Baker isn't constantly blasting music, liquid nitrogen isn't being served nearly everywhere, and p-set groups are much easier to stumble upon than events with free food. However, through meeting the people and hearing about the different academic departments, student groups, and international internships, I knew that even without all the joys of CPW, MIT would be a welcoming place for me come fall. It was simply a fit; there is really no other way to put it. MIT is home, and after being there, I couldn't imagine myself anywhere else.



I am Callie McRee, and I'm from the sunny central coast of California. I'm graduating in June from San Luis Obispo High School, and I'm eager to transition from my small town to the city. Outside of school, I spend most of my time dancing ballet, jazz, and contemporary; I plan on continuing dancing at MIT. I'm excited to meet my new classmates in September!



File Edit Options Buffers Tools Im-Python Python

from new_skills import *

def learnMarketableJobSkills():
 return linux, OSX, javascript, applescript, perl, python, PHP

if self.interest == True:
 print "E-mail join@tech.mit.edu"

---:---F1 joinTechno.py

(Python)--L1--Top-----

EVENTS MAY 3 – MAY 9

TUESDAY

(10:00 a.m. - 5:00 p.m.) Student Art Association (SAA) presents their Spring Ceramic Sale — Lobby 10

(3:00 p.m. - 4:00 p.m.) Inside 150: Computers, Calculators and Cybernetics — MIT Museum

(4:00 p.m. - 7:00 p.m.) MIT150 Symposium: Brains, Minds and Machines — 26-100

WEDNESDAY

(5:00 p.m. – 6:00 p.m.) MIT Chamber Music Society Student Concert — Killian Hall

(5:15 p.m. - 9:00 p.m.) Science Trivia Challenge — **Broad Institute**

(7:00 p.m. - 10:00 p.m.) Hackfest 2011 (2.007 Competition) Preliminary round — W34

THURSDAY

(9:00 a.m. - 5:00 p.m.) Artists Beyond the Desk Biannual Crafts Fair — 32-100 (9:00 a.m - 2:00 p.m.), E62 (9:00 a.m. – 5:00 p.m.)

(4:00 p.m. - 6:00 p.m.) CMS Colloquium Series presents Race and Representation after 9/11 — 2-105

(6:30 p.m. - 10:30 p.m.) Hackfest 2011 (2.007 Competition) Final round — W34

(8:00 p.m. - 10:00 p.m.) DanceTroupe presents: Flux

FRIDAY

(12:00 p.m. - 1:00 p.m.) Emerson Scholar Student Recital: Nathan C. Haouzi '11, piano — Killian Hall

(3:00 p.m. - 4:00 p.m.) Emerson Scholar Student Recital: Ka Yan Karen Lee G, soprano — Killian Hall

(5:00 p.m. - 6:00 p.m.) Emerson Fellow Student Recital: Stephen R. Serene '12, cello and Nicholas Joliat (G), piano — Killian Hall

(7:00 p.m., 10:00 p.m.) LSC shows The King's Speech **–** 26-100

SATURDAY

(12:00 p.m. - 2:00 p.m.) Emerson Scholar Piano Student Recital — Killian Hall

(8:00 p.m. - 10:00 p.m.) MIT Wind Ensemble — Kresge Auditorium

SUNDAY

(12:00 p.m. - 2:00 p.m.) Emerson Scholar Woodwind Student Recital — Killian Hall

(4:00 p.m. - 6:00 p.m.) MIT Concert Choir — Kresge

Auditorium

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Institute Double Take



By Nicholas Chornay

STAFF PHOTOGRAPHER

An abstract perspective of MIT's Chemistry building, Building 18, viewed from the west. At night, the windows light up in a grid pattern; the yellow glow strongly contrasts the black outer walls.

This picture was taken while rotating the camera about the center of the lens. The 1/80s exposure is short enough that the middle of the picture stays recognizable, but long enough to see the effects of the rotation on the edges. The lone individual in the window completes the composition.

Aperture: f/3.2

Exposure Time:

1/80 sec. Sensitivity:

ISO 1600

Effective Focal Length:

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ATHLETE OF THE WEEK: ARIC J. DAMA '13

Course II sophomore Aric Dama reigns as one of MIT's top pitchers

Starting pitcher helps Engineers succeed this season with hopes for a spot at Regionals

> By Zach Hynes SPORTS STAFE

Starting pitcher Aric J. Dama '13's emergence as an ace on the Engineers' roster has been one of the dominant stories of the 2011 MIT baseball season.

Dama's maturation as a pitcher over the past year has been crucial to the Engineers' success. In his freshman season, he started five games, contributing 11 appearances in total. It was a "stressful" season, said Dama, as he struggled to prove himself. However, in the nine months after the Engineers' season came to a close last May, Dama laid the foundation for this year's spectacular season. Dama's American Legion team (Wheaton, Ill.) reached the state finals last summer, and after putting in more work in the offseason this winter, he entered the season with renewed confidence. Dama began the 2011 season on a strong note, winning NEWMAC Pitcher of the Week honors in mid-March. He has continued to impress en route to a 4-1 record and the third-lowest ERA in all of Division III. Dama cited his ability to "control [his] pitches" as a major factor in his success this season.

The Engineers will be in action this weekend in the NEWMAC conference tournament as they hope to earn a spot in the regional championships.



Tennis finishes perfect season with a 6-3 win

Engineers beat Trinity for 11th straight win, now await selection to Nationals

> By Jennifer Rees TEAM REPRESENTATIVE

This past Saturday, MIT Women's Tennis finished their season with a strong win over Trinity. In doubles both the num-

ber one team of Lauren C. Ouisenberry '14 and Candace L. Wu '14, and the number two team of Julia C. Hsu '14 and Bianca M. Dumitrascu '13, destroyed their opponents with scores of 8-2. This

brought MIT into the lead 2-0. Melissa A. Diskin '11 and Katharine A. O'Neal '14 had a closer match. After the turning game at 2-all, they took the lead to win their match 8-4. In exhibition, Jennifer A. Rees '11 and Jenny C. Dohlman '11 had a long match. The match was decided in the tie breaker, where they won 9-8(6). Caitlin R. Pomeroy '13 and Hillary E. Jenny '12 lost their match 8-0. Over all MIT was in the lead 3-0 going into the singles matches.

In singles, O'Neal at four singles lost a tough match 6-1, 6-1. At seven, eight, and nine singles, Rees, Dohlman, and Pomeroy all lost their matches 8-1. Trinity P. Leonard '13 at ten lost 8-4. Wu at two destroyed her opponent quickly with a score of 6-1, 6-2. Dohlman lost at six singles. She twisted her foot in the first game, but she toughed it out and finished the match. She lost 6-0, 6-2. Diskin lost a long match. She came back in the second set only to lose it in the tie break 6-3, 7-6(3). At three, Hsu pulled out a tough match. She won the first set in a tie break and then took the second set with a score of 7-6(4), 7-5. Quisenberry at one played a tough match. She was resilient through the other teams' heckling and came back from being down 5-1 in the first set to win it in the tiebreak. She pulled the match out in the third set tie break, winning the match 7-6(4), 4-6, 13-11. This gave MIT the win over Trinity 6-3. MIT is undefeated for the season with a record of 11-0. The team finds out May 9 if they made it to Nationals.

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Cycling finishes dominant ECCC conference season

Racers now prepare for national championships

By Adam Bry

TEAM REPRESENTATIVE

At the Eastern Collegiate Cycling Conference (ECCC) championship weekend, held in State College, Pa., the MIT Cycling team completed a fantastic road racing season,

> winning the season points series by a commanding 1957 to 1431 margin over second place Penn State.

The Saturday road race was held on a 21-mile loop with two hills and a major climb totaling

over 2000 feet of elevation gain per lap — by far the most challenging course of the year. The women's A/B field did three laps of the course, but Katie J. Quinn G left little doubt of the outcome after the first time over the climb, where she launched an attack that no one else in the field had the legs to follow. Quinn rode the rest of the race alone off the front, winning by almost 10 minutes with a time of 3 hours, 52 minutes, putting a fitting exclamation point on her overall individual conference win. Yuri Matsumoto G hung with the closest chase group for a third-place finish, and Diana Siegel G finished sixth in her first B race

The men's A race was four laps of the course for a leg-popping 8000 ft of elevation gain over 85 miles. The field started with 66 riders, but a blistering pace on the first climb cut the pack in half, with John J. Rhoden G, Spencer D. Schaber G, and Adam P. Bry G all managing to stick with the front group. On the third lap, a lead group of 10 riders escaped on the climb, with all three MIT riders narrowly missing the break and working in smaller chase groups for the final lap. Rhoden was the top MIT finisher at 12th, followed by Bry at 13th and Schaber in 17th. MIT was the only

team to have three riders in the top 20.

Sunday's criterium course was held on Penn State's "frat row" and featured six corners, including a technical chicane. Under the best of circumstances, it would have been an extremely challenging course, but a light drizzle during the men's and women's A races slicked the roads and turned the race into a nightmarish slip-and-slide survival test. In the women's race, Quinn, Matsumoto and Christina M. Birch G executed multiple attacks, setting up a three-person breakaway with Birch and Quinn, but unfortunately crashes took out both MIT riders. Isolated in the pack, Matsumoto put in a gutsy move with three laps remaining and held off the pack for a solo victory. In the men's D race. Samuel M. Nicaise G rode with poise and tenacity to stick with the front selection and pull out an eighth-place finish in the pack

From a team perspective, the weekend showed the incredible progress made by newer riders during the year with 10 of the 15 MIT riders competing in the A category. MIT has long enjoyed a stranglehold on the women's A field, and Quinn and Birch, both racing As for the first time this year, surely dashed the hopes of other schools hoping that MIT's dominance might fade. On the men's side, first-year riders Andrew C. Lysaght G and Joseph P. Near G dominated in D, C, and B races over the course of the season, with both riders finishing the year As, proving they could hang with a field that often features professional-caliber riders who compete in some of the biggest races in the country. The up-and-coming talent will be on display at the road national championships in Madison, Wis., May 6-8, where MIT will send a team of 10 riders, including four first-time participants.

UPCOMING HOME EVENTS

Thursday, May 5

Track & Field — New England Div III Championship

10 a.m., Steinbrenner Stadium

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